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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/758,035

01/16/2004

Kong Kim

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09/25/2006

EXAMINER

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WASHINGTON, DC 20037

ART UNIT

PAPER NUMBER

1773

DATE MAILED: 09/25/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/758,035	Applicant(s) KIM ET AL.	
	Examiner Louis Falasco	Art Unit 1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 8 and 9 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>1/16/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Papers Received

1. The Information Disclosure Statement filed 11/22/05 is acknowledged.

Claims

2. The claims are: 1 to 9.

Election/Restriction of Invention

3. Applicant's election of Group I, claims 1 to 7 in the reply filed on 11/22/05 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).
4. The claims under consideration are: 1 to 7.

Claim Rejections - 35 U.S.C. §102 and 35 U.S.C. §103

Statutory Basis

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Rejections

5. Claims 1 and 3 to 7 are rejected under 35 U.S.C. §102(b) as being unpatentable over any of **Tanahashi et al** (US 6511761), **Honda** (US 5851643) or **Hosoe et al** (US 5723198).

6. Any of **Tanahashi et al**, **Honda** and **Hosoe et al** teach a disk structure for a perpendicular magnetic recording medium, with a structure that includes a textured *glass* disk substrate base, a soft magnetic layer on the base member; and a non-magnetic *Carbon* protection layer formed on a *soft* magnetic layer. In **Tanahashi et al** this perpendicular disk structure is illustrated by any of Figs. 1, 2, 7 or 8 with reference numbers at col. 9 lns 22-56 having *glass* disk substrate specified at col. 3 lns 39; a non-magnetic *Carbon* protection film is illustrated as layer 16; for a perpendicular recording medium as shown at Table 2, *glass* disk substrate is illustrated as layer 11 and specified

at col. 4 lns 47,48; soft magnetic is illustrated as layer **14**. In **Honda** this perpendicular (see col. 2 lns 43-47, col. 10 lns 13, 14, 25, col. 11 lns 5,6 col. 24 ln 6) disk structure is illustrated by any of Figs. **14** or **15** having *glass* disk substrate specified at col. 8 ln 18, col. 13 ln 11, col. 26 ln 63; with a non-magnetic *Carbon* protection film illustrated as layer **27**, col. 17 ln 42, col. 22 ln 60; soft magnetic film illustrated as layer **25/29** and layer **49** col. 6 lns 25-29, col. 23 lns 53, 54, 60, 61. In **Hosoe et al** this perpendicular (see e.g., col. 5 lns 64, 65, col. 6 lns 50,51) disk structure is illustrated by any of Figs. **6**, **11** having *glass* disk substrate layer **61** specified at col. 2 lns 20 and 25, col. 3 lns 48-53, col. 7 ln 22, col. 10 ln 3, col. 25 ln 53, col. 27 ln 22, 30; with a non-magnetic *Carbon* protection illustrated as layer **67**, col. 25 ln 67 to col. 26 ln 1, col. 30 lns 17,18, col. 31 ln 67; having a soft magnetic film illustrated as layer **57**, col. 20 lns 59-65, col. 25 lns 12-19, 45.

a. As regard claim 6 texture for giving magnetic anisotropy: see **Tanahashi et al** col. 3 lns 40-42, and Table 2 col. 8 ln 23-35, 64-67; see **Honda** col. 1 lns 66 to col. 2 ln 2, col. 3 ln 44, col. 4 ln 42,43, col. 6 ln 31, col. 7 lns 16-27, col. 10 lns 9-25, col. 12 ln 28, col. 20 ln 45,46, col. 22 ln 23; and see **Hosoe et al** col. 5 lns 7,8, 42, col. 18 lns 20-38.

7. Claim 2 is rejected under 35 U.S.C. 102 (b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over any of **Tanahashi et al** (US 6511761), **Honda** (US 5851643) or **Hosoe et al** (US 5723198).

8. **Tanahashi et al**, **Honda** and **Hosoe et al** teach the requirements of the claim except they do not do not recite the nature for the carbon protection layer. However,

the carbon protection layer is known from any of **Tanahashi et al**, **Honda** and **Hosoe et al** and though not identified as to whether or not the resultant *Carbon* would form an amorphous layer, it would reasonably be expected to be since it is produced by the same sputtering process as instantly disclosed for an amorphous layer *cf* instant specification last paragraph of page -9- with: **Tanahashi et al**, at col. 4 lns 55-58, **Honda** at col. 15 lns 4-8 and **Hosoe et al** at col. 16 lns 2-5. The claiming of an unidentified property appearing inherently present does not necessarily make a claim patentable. Where claimed and prior art products have been shown to be substantially identical in structure or composition or produced by identical processes and a case of anticipation or prima facie obviousness has been established the burden of proof shifts to applicant to show prior art products do not necessarily nor inherently possess the characteristic of the claimed product - see In re Best, 562 F.2d 1252, 1254, 195 USPQ 430, 433 (CCPA 1977).

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over any of **Tanahashi et al** (US 6511761), **Honda** (US 5851643) or **Hosoe et al** (US 5723198) taken with **Howard** (US 4778582).

10. **Tanahashi et al**, **Honda** and **Hosoe et al** teach the requirements of the claim except they do not do not recite the nature for the *Carbon* protection layer. Alternative to the rejections above as anticipated by or obvious over any of **Tanahashi et al** (US 6511761), **Honda** (US 5851643) or **Hosoe et al** alone, the amorphous *Carbon* protection

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layer is known from **Howard** for a magnetic recording disk protective layer. In **Howard** the amorphous *Carbon* protection layer is produced by identical materials as used by applicants in the instant Examples, applied with the same sputtering process as in the instant Examples *cf* instant "Second Example" last paragraph of page -13- and **Howard** col. 3 lns 49-61.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adopt the sputtered hydrogenated carbon protective layer as shown by **Howard** in recording media of **Tanahashi et al**, **Honda** or **Hosoe et al** for the purpose of having a protection layer firmly adhered to the recording media. One skilled in the art would have been motivated to adopt **Howard** with the expectation of increasing protection against wear and corrosion of the magnetic recording media (col. 1 lns 34, 35 and col. 1 ln 60 to col. 2 ln 2).

Conclusion

11. The claims are 1 to 9. Claims 1 to 7 are under consideration.

- Restriction has been required.
- No claim has been allowed.
- Information Disclosure Statement has been received.

INQUIRES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louis Falasco, PhD whose telephone number is (571)272-1507. The examiner can normally be reached on M-F 10:30 - 7:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol D. Chaney, PhD can be reached at (571)272-1284. The fax phone number for the organization where this application or proceeding is assigned is (571)273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LF

09/06



CAROL CHANEY
SUPERVISORY PATENT EXAMINER